

REMARKS/ARGUMENTS

Overview of the invention:

The secondary lower pole of a magnetic write head is described. An additional layer on the main lower pole extends beyond the ABS-side edge of the lower pole, as a ledge that terminates at the ABS, said ledge resting on a non-magnetic layer.

Reconsideration is requested of the rejection of claims 4 and 6 under 35 U.S.C. 103 as being unpatentable over Santini (US 6172848) in view of Santini (US 6130809):

Claim 4 has been amended so as to remove any possibility of its being interpreted to describe a structure other than that illustrated in our FIG. 4. The newly amended claim 4 reads as follows:

4. A magnetic write head, having an air bearing surface (ABS), comprising:
 - on a substrate, a first layer of high magnetic permeability material, having an edge whose surface is normal to said substrate and parallel to said ABS, that serves as a primary lower magnetic pole;
 - a first non-magnetic layer that contacts said first layer only at said edge and extends away therefrom, said non-magnetic layer having a top surface that is coplanar with that of said primary pole;
 - a second layer of high magnetic permeability material that serves as a secondary lower pole that fully covers and contacts said primary pole and said non-magnetic layer, above which it serves as a ledge having a width;
 - a field coil over, and insulated from, said lower poles;
 - an upper magnetic pole that overlies said field coil, contacts said lower pole at a second side that is opposite to said first side, and that is separated from said ledge by a second layer of non-magnetic material that is a write gap, said upper pole having, at the write gap, a width equal to said ledge width, whereby it defines a track width; and
 - said ledge extending away from said primary lower pole by an amount.

In light of the above, we offer the following response to examiner's arguments:

(1) Regarding Santini '848 (fig. 21AD), examiner states that layer P1B has an edge that is normal to a substrate and then notes that "item 608 contacts item P1B/S2 at edge and extends away therefrom". Presumably this is intended to show that Santini

teaches the same sub-structure denoted by our phrase "a first non-magnetic layer that contacts said first layer **only** at said edge and extends away therefrom". As can readily be seen, Santini's P1B's lower surface contacts 608's upper surface along both their entire lengths but they do not contact each other along either of their edges. Nor have we been able to find where 608 extends away from P1B.

(2) Examiner then states "figure 21AD have a coplanar top surface". We do not understand what this means.

(3) Next, examiner notes that layer P1T serves as a secondary lower pole. This is certainly true but does not address the additional limitations of our claim 4 wherein said secondary lower pole fully covers and contacts said primary pole and said non-magnetic layer, above which it serves as a ledge. Item P1T does not fully cover, nor does it contact, non-magnetic layer 608.

(4) After acknowledging that the additional limitations that we cite immediately above are not taught by Santini '848, examiner then turns to Santini '809, particularly FIGs. 17 and 18, and equates pole tip 230 with our second layer of high magnetic permeability material (that serves as a secondary lower pole), front component 226 with our non-magnetic layer (since 230 lies on 226) and 228 with our lower magnetic pole. As with Santini '848, this ignores the limitation that 230 must fully cover and contact 226 and that 226 must be non-magnetic since 230 rests on it.

(5) Examiner then argues that it would have been obvious to replace pole layer P1T of Santini 848's fig. 21AD with Santini 809's item 292 of fig. 17. We have two difficulties with this argument:

(a) As already demonstrated above, neither of the Santini references teaches the limitation wherein the secondary lower pole fully covers and contacts the primary lower pole as well as a non-magnetic layer, above which it serves as a ledge.

(b) Quite aside from the fact that replacing Santini 848's pole tip with Santini 809's pole tip does not generate the present invention, what motivation would one skilled in the art have to make such a substitution, bearing in mind that both structures were invented by the same person? If there were motivation (i.e. advantages) to merging the structures in the manner envisaged by examiner, it would be reasonable to


Appl. No. 10/706,381
Amdt. dated 10/03/2007
Reply to Office action of 09/10/2007

expect such a structure to have been disclosed by Santini, either as one of the embodiments of '848 or '809 or in some other invention.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

SAILE ACKERMAN LLC
28 Davis Avenue
Poughkeepsie
NY 12603

By 

Stephen B. Ackerman
Reg. No. 37761